



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,464	02/14/2007	Sung-Hoon Kim	CU-5131 WWP	1317
26530 7590 12/30/2009 LADAS & PARRY LLP 224 SOUTH MICHIGAN AVENUE SUITE 1600 CHICAGO, IL 60604				
EXAMINER				
CHASE, SHELLY A				
ART UNIT		PAPER NUMBER		
2112				
MAIL DATE		DELIVERY MODE		
12/30/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,464

Applicant(s)

KIM ET AL.

Examiner

Shelly A. Chase

Art Unit

2112

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 11-13, 21 and 24 is/are rejected.
- 7) ☒ Claim(s) 4-6, 8-10, 16, 18-20 and 22-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3-2007 & 8-2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 to 24 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119, which papers have been placed of record in the file.

Information Disclosure Statement

3. The references listed in the information disclosure statement submitted on 3-22-2007 and 8-0702009 have been considered by the examiner (see attached PTO-1449).

Drawings

4. Figures 1 to 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 to 3, 7, 11 to 13, 17, 21 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Strolle et al. (USP 7194047 B2).

Claims 1 and 11:

Strolle teaches a hierarchical transmission system for digital television (DTV) using an 8 level vestigial sideband (8VSB) technique, the system comprising: a Robust encoder/8VSB modulator (10) receiving normal data packets and High priority data packets ("Robust data") (see fig. 1 and col. 6, lines 32 to 36) and a virtual encoder (22) encoding the received normal data packets and high priority data packets (see col. 7, lines 33 to 36). Strolle teaches that a VSB modulator (28) modulates and outputs the modulated data (see col. 7, lines 40 et seq.). Strolle further teaches that the trellis encoder encodes the data according to a 16 state code (see col. 10, lines 15 to 42).

As per claims 2 and 12, Strolle teaches that a symbol set for 8VSB is (-7, -5, -3, -1, 1, 3, 5, 7) and that the encoder uses an 8VSB technique (see col. 1 lines 60 to 62 and col. 7, lines 38 to 45).

As per claims 3 and 13, Strolle teaches that a robust data preprocessor ("robust encoder") process the robust data according to 2-bit nibbles and the virtual encoder (22) processes the received robust data based on the 2-bit nibble (see col. 11, line 13 to col. 12, line 46). Strolle further teaches that the encoder uses a 2/3 coding rate and 1/3 coding rate that is compliance for MPEG (see col. 4, lines 65 et seq.).

Claims 7 and 17:

Strolle teaches a hierarchical transmission system for digital television (DTV) using an 8 level vestigial sideband (8VSB) technique, the system comprising: a robust data receiver for receiving the transmitted normal data packets and the robust data packets (see fig. 3 and col. 13, lines 11 to 21) and an equalizer (326) for outputting the type of signal (see col. 13, lines 48 to 54). Strolle also teaches a trellis decoder (328) decoding the symbols outputted from the equalizer (see fig. 3A and col. 13, lines 55 et seq.).

Strolle further teaches that a two-tier trellis decoder (426) that is part of the demodulator/ decoder (314) receives the trellis decoded data and outputs a decoded data (see col. 15, lines 29 et seq.). Strolle teaches that the trellis decoding is performed according to a 16 state code (see col. 16, lines 25 to 35).

Claim 21:

Strolle teaches a hierarchical transmission system for digital television (DTV) using an 8 level vestigial sideband (8VSB) technique, wherein the symbol set for 8VSB is (-7, -5, -3, -1, 1, 3, 5, 7), the system comprising a robust encoder/8VSB modulator using the symbol set (see col. 7, lines 38 to 42) and a virtual encoder (22) encoding the data according to a 16 state code mapping the data based on the 8VSB technique (see col. 10, lines 15 et seq.). Strolle also teaches that a robust/normal flag indicates the type of data (see col. 12, lines 50 to 55). Strolle further that the transmitted signal is a vestigial sideband signal (see col. 11, lines 1 to 11).

As per claim **24**, Strolle teaches that the normal data packets and the robust data packets are mixed by a multiplexer (20) (see col. 6, lines 31 et seq.), and that the header is encoded to include backward compatibility (see col. 11, lines 35 to 42).

Allowable Subject Matter

7. Claims 4 to 6, 8 to 10, 14 to 16, 18 to 20 and 22 to 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A. Chase whose telephone number is 571-272-3816. The examiner can normally be reached on Mon-Fri from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on 571-272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shelly A Chase/
Primary Examiner, Art Unit 2112